

Minimally Invasive Sinus Tarsi Effective for Intra-Articular Calcaneal Fractures

Written by Emma Hitt Nichols, PhD

The minimally invasive sinus tarsi approach yielded similar clinical and radiologic results compared with the extensile lateral approach for the treatment of displaced intra-articular calcaneal fractures with no wound complications. Yeong-Seub Ahn, MD, Chonnam National University Hospital, Gwangju, Korea, presented data from a study that compared the outcomes of minimally invasive sinus tarsi compared with the extensile lateral approach for the treatment of intra-articular calcaneal fractures.

The current standard treatment of displaced intra-articular calcaneal fractures is open reduction and internal fixation, which is achieved by 1 of 2 methods: the minimally invasive sinus tarsi approach or the extensile lateral approach. The advantage of the extensile lateral approach is that it provides an excellent view of the subtalar joint, a more accurate reduction of the facet fragment, access to the calcaneocuboid joint, and sufficient area to fix a plate. However, the extensile lateral approach is associated with an incidence of wound problems of up to 30%, deep infections, injury to the sural nerve, and subtalar arthritis.

By contrast, the advantages of the minimally invasive sinus tarsi approach include less soft tissue trauma, less risk of operative complications, and a maintained good reduction of the fracture site. However, the minimally invasive approach is more difficult to perform and there is poor visualization of the fracture site. Because there have been few studies to compare the 2 approaches, the purpose of this study was to compare the outcomes of the extensile lateral and minimally invasive sinus tarsi approaches for the treatment of displaced intra-articular calcaneal fractures.

In this study, 100 patients were treated between September 2004 and December 2011. Patients were assessed with a radiographic evaluation for Böhler's angle, the critical angle of Gissane, and calcaneal length, height, and width. The clinical evaluation included American Orthopaedic Foot & Ankle Society (AOFAS) score, the Visual Analog Scale (VAS) for pain, and the Foot Function Index (FFI).

The clinical outcomes, including AOFAS score, VAS, and FFI, were similar among both groups. Similarly, there was no significant difference between the 2 approaches in terms of the critical angle of Gissane ($P=.424$), Böhler's angle ($P=.409$), and calcaneal length ($P=.423$), height ($P=.371$), and width ($P=.419$). There was a significant difference in wound complications between the 2 groups, with 13.3% of patients experiencing a wound complication in the extensile lateral group compared with 0% in the sinus tarsi group ($P=.004$). Other complications, including sural nerve injury, peroneal tendinitis, and subtalar arthritis, occurred at similar frequencies among the 2 groups.

In conclusion, Prof Ahn stated that, in his opinion, the data from this study indicate that use of the extensile lateral or minimally invasive sinus tarsi methods resulted in similar clinical and radiologic outcomes; however, there were lower rates of wound complications associated with the sinus tarsi approach.

HA Injection, Dry Needling Equally Effective, Safe in Patients With Incurable Plantar Fasciitis

Written by Phil Vinall

Ultrasound-guided hyaluronic acid (HA) injection and dry needling are effective and safe for patients with plantar fasciitis who did not respond to commonly performed conservative therapy, according to Kang Lee, MD, Kangwon National University Hospital, Chuncheon, Republic of Korea.

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